WHAT IS CLAIMED IS:

1. A displacement detection method in which by reflecting a light beam on a surface of an object to be measured, a displacement of the surface of the object is detected from a change of the reflected light beam due to a change of the displacement of the surface of the object, comprising the steps of:

causing light beams to be incident upon a substantially identical position on the surface of the object from at least two light sources confronting each other substantially;

detecting by position detection means directional changes of the light beams reflected on the surface of the object, respectively;

normalizing output signals of the position detection means by luminous intensities received by the position detection means, respectively; and

calculating a sum or a difference of the normalized output signals of the position detection means.

2. The displacement detection method as claimed in Claim 1, wherein an optical path plane is formed by the light beam incident upon the surface of the object and the reflected light beam and a position detector having a light receiving face divided into two light receiving portions by a dividing line in a direction substantially perpendicular to a tangent between the optical path plane and the light receiving face acts as each of the position detection means;

wherein by causing the reflected light beam to be incident upon the dividing line of the light receiving face, the position detector detects a position of the reflected light beam from a difference of signals detected at the two light receiving portions of the light receiving face, respectively such that the difference of the signals is normalized by a sum of the signals.

3. The displacement detection method as claimed in Claim 2, wherein the two light receiving portions of the light receiving face have a substantially identical detection sensitivity.

4. A displacement detection device for detecting a displacement of a surface of an object to be measured, comprising:

a plurality of irradiation detection systems each of which includes a light source for emitting a light beam to the surface of the object, a position detector for detecting a direction of the light beam reflected on the surface of the object and a normalizing mechanism for normalizing an output signal of the position detector by a luminous intensity received by the position detector;

wherein the light beams from the light sources of the irradiation detection systems substantially confront each other so as to be incident upon a substantially identical position on the surface of the object;

wherein a sum or a difference of the output signals of the position detectors is calculated by using signals outputted from the normalizing mechanisms of the irradiation detection systems.

5. The displacement detection device as claimed in Claim 4, wherein an optical path plane is formed by the light beam incident upon the surface of the object and the reflected light beam and a luminous intensity detection element having a light receiving face divided into two light receiving portions by a dividing line in a direction substantially perpendicular to a tangent between the optical path plane and the light receiving face acts as the position detector;

wherein by causing the reflected light beam to be incident upon the dividing line of the light receiving face, the luminous intensity detection element detects a position of the reflected light beam from a difference of signals detected at

the two light receiving portions of the light receiving face, respectively;

wherein the normalizing mechanism normalizes the difference of the signals by a sum of the signals.

6. The displacement detection device as claimed in Claim 5, wherein the two light receiving portions of the light receiving face have a substantially identical detection sensitivity.

7. A recording apparatus for performing recording on a master of an information recording medium, in which the master has a recording material, comprising:

a rotational mechanism for holding and rotating the master;

a displacement detection device for detecting a displacement of a surface of the master, which includes a plurality of irradiation detection systems;

wherein each of the irradiation detection systems includes a light source for emitting a light beam to the surface of the master, a position detector for detecting a direction of the light beam reflected on the surface of the master and a normalizing mechanism for normalizing an output signal of the position detector by a luminous intensity received by the position detector;

wherein the light beams from the light sources of the irradiation detection systems substantially confront each other so as to be incident upon a substantially identical position on the surface of the master;

wherein a sum or a difference of the output signals of the position detectors is calculated by using signals outputted from the normalizing mechanisms of the irradiation detection systems; and

an irradiation means for irradiating a recording beam to the surface of the master at a focal position of the recording beam on the basis of an information

signal to be recorded such that the focal position of the recording beam is changed in accordance with the displacement detected by the displacement detection device.

8. The recording apparatus as claimed in Claim 7, wherein a step of a predetermined depth is provided on the surface of the master or at a height substantially identical with the surface of the master;

wherein by detecting a sensitivity of the displacement detection device from a signal outputted upon scanning of the step by the displacement detection device, a signal for the irradiation means is corrected.

9. The recording apparatus as claimed in Claim 7, wherein the recording beam is an electron beam.

10. The recording apparatus as claimed in Claim 7, wherein a pattern for adjusting the focal position of the recording beam is formed on the surface of the master or at a height substantially identical with the surface of the master.